April 6 - April 12, 2001
The Terra spacecraft is currently operating in Nominal Mode. All instruments are functioning well in Science Mode.

A 25.320-second duration drag make-up maneuver was successfully executed on April 5 (DOY 095). The solar array was commanded to track at 3 omega via stored command, and was parked at 300ö for the maneuver. The minimum battery state of charge was 77.3% (normal orbital discharge). Post maneuver analysis indicated that the next drag make-up maneuver would be required on May 2, 2001 (DOY 122), assuming there is no marked increase in solar activity.

Terra Command and Data Handling and Communications subsystems continue to operate nominally. A routine Master Oscillator frequency adjust was performed on April 12 (DOY 102). The TCS, EPS, PMS, and GNC performances are all nominal.

The CERES instrument exhibited a signature change on the + / - 15-volt monitor graphs due to scan rate changes and reduced Biaxial mode scanning. The CERES team has been consulted; this was anticipated and is not an issue.

Several MDA2BITE failures (High Gain Antenna Motor Drive Assembly upsets) occurred during this reporting period with no resultant data loss. One unrecoverable loss of MODIS data resulted from an MDA2BITE failure on DOY 102 (April 12, 2001).

No MODIS calibration roll maneuvers are scheduled for April.

ISSUES / ANOMALIES:
Electrical Power Subsystem (EPS) engineering personnel completed analysis on the battery discharge spike that occurred on DOY 085 (March 26, 2001). There was a small increase in the Housekeeping current draw at the time of the spike; however, this was not the maximum Housekeeping current for the day. Instrument current appeared relatively constant at the time of the spike.

In trying to isolate the Housekeeping current increase, heater and Reaction Wheel Assembly (RWA) status were examined, and were determined not to have been the cause. No attitude spikes or rate errors were detected. In summary, the Terra Flight Operations Team was unable to isolate any one source as the cause of the increased Housekeeping current draw resulting from the observed increase in battery discharge current (approximately 1.5 amps). Cumulative small increases account for only a portion of what was observed.

There appears to be no on-board anomaly and therefore no major concern as a result of this event. All systems are performing nominally and within the desired range. Historically, the battery

discharge current has varied between 15.5 Amps and 22.0 Amps while in eclipse. This particular spike was 22.7 Amps. The Terra Flight Ops Team is monitoring for additional spikes and will investigate accordingly.

The initial Tracking and Data Relay Satellite System (TDRSS) scheduling during the upcoming space shuttle mission is a problem. The phasing of the support does not match the mission requirements and places the mission at risk of loosing significant data. This problem is being worked with the Network and contingency plans are being prepared for adding dumps to the Polar Ground Network sites.

PLANS:

Flight Ops Team will support the MISR ACE-Asia Campaign in April 2001.
The new MISR software upload is scheduled for May 22, 2001.
